

## Message Text

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ORIGIN EUR-04

INFO OCT-01 ISO-00 /005 R

DRAFTED BY: EUR/RPM: DTELLEEN

APPROVED BY: EUR/RPM: DTELLEEN

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R 010154Z NOV 74

FM SECSTATE WASHDC

TO AMEMBASSY ATHENS

AMEMBASSY ANKARA

AMEMBASSY BELGRADE

AMEMBASSY HELSINKI

AMEMBASSY LISBON

AMEMBASSY OSLO

AMEMBASSY LUXEMBOURG

AMEMBASSY MADRID

AMEMBASSY OTTAWA

AMEMBASSY REYKJAVIK

AMEMBASSY STOCKHOLM

AMEMBASSY VIENNA

AMEMBASSY WARSAW

USMISSION GENEVA

AMEMBASSY BERN

UNCLAS STATE 228249

FOLLOWING REPEAT STATE 228249 ACTION THE HAGUE COPENHAGEN

PARIS BONN DUBLIN ROME BRUSSELS LONDON NATO OECD PARIS

17 OCT 74

QTE

UNCLAS STATE 228249

E.O. 11652:N/A

TAGS: SENV, NATO

SUBJECT: CCMS ENERGY CONSERVATION UTILITY LOAD MANAGEMENT

-- NOVEMBER 12-13

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1. TENATIVE AGENDA FOR SECOND CCMS MEETING TO BE HELD AT  
NATO BRUSSELS.

-- TENATIVE AGENDA (SEE FOOTNOTE 1)

-- ELECTRIC UTILITY LOAD MANAGEMENT CONFERENCE  
-- NORTH ATLANTIC TREATY ORGANIZATION  
-- COMMITTEE FOR THE CHALLENGE OF MODERN SOCIETY  
-- BRUSSELS - NOVEMBER 12-13, 1974

NOVEMBER 12

9:30 AM MEETING CONVENED AND WELCOME TO DELEGATES  
9:45 AM BRIEF REVIEW OF RESULTS OF JULY 9-10 PARIS  
-- MEETING AND AUGUST 26 WASHINGTON MEETING  
10:00 AM OBJECTIVES OF PRESENT MEETING  
10:15 AM GENERAL ROUNDTABLE DISCUSSION REGARDING  
-- INFORMATION TO BE EXCHANGED. SEE EXHIBIT  
-- 1 FOR TOPICS  
12:00 NOON LUNCH  
2:00 PM MEETING RECONVENED AND CONTINUATION OF  
-- ROUNDTABLE DISCUSSION  
4:30 PM LISTING OF PRIORITIES FOR ROUNDTABLE  
-- DISCUSSION ON FOLLOWING DAY  
  
5:00 PM MEETING ADJOURNED

NOVEMBER 13

9:30 AM MEETING RECONVENED  
9:45 AM CONTINUATION OF GENERAL ROUNDTABLE  
-- DISCUSSION  
12:00 NOON LUNCH  
2:00 PM DISCUSSION ON FUTURE ACTION  
3:00 PM AGREEMENT ON RESOLUTION ON FURTHER  
-- INFORMATION TO BE EXCHANGED AND ON  
-- SCHEDULE FOR FURTHER ACTION INCLUDING  
-- NEXT MEETING  
4:00 PM MEETING ADJOURNED

-- EXHIBIT 1

-- TENTATIVE LIST OF TOPICS TO BE DISCUSSED  
-- AT BRUSSELS LOAD MANAGEMENT CONFERENCE (1)  
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GENERAL NOTE ON INFORMATION TRANSFER

SINCE THE REPRESENTATIVES OF U.S. ELECTRIC UTILITIES WILL BE REPRESENTED AT THIS CONFERENCE IN ADDITION TO THE REPRESENTATIVES OF EUROPEAN UTILITIES, IT IS HOPED THAT THE FLOW OF INFORMATION ACROSS THE ATLANTIC WILL BE BOTH WAYS. IN ADDITION, SINCE THE TOPIC OF ELECTRIC HEATING AND STORAGE HEATING IN PARTICULAR WAS COVERED FAIRLY EXHAUSTIVELY AT THE PARIS MEETING, IT IS RECOMMENDED THAT GREATER EMPHASIS BE PLACED AT THIS MEETING ON THE POSSIBILITIES OF THE MANAGEMENT OF ELECTRIC LOADS BY INDUSTRY.

## 1.0 LOAD LEVELING THROUGH ENERGY STORAGE BY ELECTRIC

### -- UTILITY

SUCH ENERGY STORAGE CAN LEVEL THE LOAD BY HAVING THE ENERGY TO BE STORED GENERATED BY BASE-LOAD OR INTER-MEDIATE LOAD UNITS DURING TROUGH IN DEMAND AND THEN USING THE STORED ENERGY DURING PEAKS. IN ORDER FOR SUCH A STORAGE SYSTEM TO CONSERVE ENERGY, THE OVERALL EFFICIENCY OF THE BASE/INTERMEDIATE LOAD UNITS PLUS STORAGE SYSTEM MUST EXCEED THE EFFICIENCY OF THE PEAKING UNITS WHOSE USE IS AVERTED. SUCH AN ANALYSIS SHOULD ACCOUNT FOR THE RELATIVE SCARCITY OF THE ENERGY RESOURCES USED (E.G., COAL FOR BASE/INTERMEDIATE LOAD UNITS VERSUS DISTILLATE FOR PEAKING UNITS).

IT IS SUGGESTED THAT THE FOLLOWING STORAGE SYSTEMS BE DISCUSSED TO DETERMINE THEIR RELATIVE DEGREE OF DEVELOPMENT AND COMMERCIALIZATION IN THE U.S. AND EUROPE:

- 1.01 COMPRESSED AIR STORAGE (FOR GAS TURBINES/COMBINED CYCLE UNITS)
- 1.02 STEAM /PRESSURIZED HOT WATER STORAGE
- 1.03 ELECTRIC STORAGE BATTERIES
- 1.04 STORAGE OF ELECTROLYTIC HYDROGEN
- 1.05 FLYWHEELS
- 1.06 ELECTROMAGNETIC STORAGE SYSTEMS

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- 1.07 OTHER

## 2.0 LOAD LEVELING IN INDUSTRY

THERE ARE TWO POSSIBLE APPROACHES: PEAK SHAVING THROUGH SALE OF LARGE BLOCKS OF INTERRUPTIBLE POWER, AND PERMANENT SHIFTING OF LOADS TO THE OFF-PEAK. U.S. UTILITIES HAVE HAD SOME LIMITED SUCCESS WITH THE FORMER APPROACH AND ESSENTIALLY NO SUCCESS WITH THE LATTER APPROACH. (SEE FOOTNOTE 2)

IT IS SUGGESTED THAT THIS TOPIC BE DISCUSSED WITH A VIEW TO DETERMINING WHETHER THE EXPERIENCE OF THE EUROPEAN UTILITIES PARALLELS OR DIFFERS FROM U.S. EXPERIENCE. IF THERE ARE SIGNIFICANT DIFFERENCES, THEN THEIR CAUSE SHOULD BE ASCERTAINED, E.G. TECHNOLOGY, RATE-STRUCTURE, ETC. IT IS RECOMMENDED THAT LOAD LEVELING OPPORTUNITIES IN THE FOLLOWING INDUSTRIES BE DISCUSSED:

- 2.01 IRON AND STEEL PRODUCTION
- 2.02 IRON FOUNDRIES
- 2.03 GLASS

- 2.04 ALUMINUM
- 2.05 CEMENT
- 2.06 OTHER

SPECIFIC OPERATIONS WHICH MAY OFFER A POTENTIAL FOR UTILIZATION OF OFF-PEAK ELECTRIC ENERGY INCLUDE: MELTING, HOLDING, STRESS RELIEVING, BAKING, CRUSHING/GRINDING, DRYING, AND REFRIGERATION.

WHERE SPECIFIC INDUSTRIAL ENTERPRISES WITHIN THE TERRITORY SERVED BY A UTILITY REPRESENTED AT THE CONFERENCE ARE SUCCESSFUL USERS OF OFF-PEAK POWER, IT WOULD

BE APPRECIATED IF ARRANGEMENTS COULD BE MADE FOR VISITS TO SUCH ENTERPRISES BY REPRESENTATIVES OF THE U.S. FEDERAL ENERGY ADMINISTRATION.

### 3.0 AIR CONDITIONING UNCLASSIFIED

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IT IS SUGGESTED THAT THE REPRESENTATIVES OF THE U.S. UTILITIES EXPLAIN THE PROBLEMS OF RAPIDLY INCREASING AIR CONDITIONING LOADS AND THAT THESE BE DISCUSSED WITH EMPHASIS ON THE FOLLOWING:

- 3.01 NATURE OF AIR CONDITIONING LOAD: LOAD FACTOR, DIVERSITY, ETC.
- 3.02 RATE STRUCTURE IMPLICATIONS FOR SUMMER-PEAKING UTILITIES
- 3.03 POSSIBLE SOLUTIONS TO PROBLEM (E.G. COLD STORAGE, DEFERRABLE LOAD CONTROL, ETC.)

### 4.0 ELECTRIC HEATING

THERE IS INTEREST ON THE PART OF THE EUROPEAN UTILITIES ON U.S. EXPERIENCE AS FAR AS THE EFFECT OF DIRECT ELECTRIC SPACE HEATING ON THE LOAD CURVE, AND THERE IS INTEREST ON THE PART OF THE U.S. UTILITIES IN THE LOAD CHARACTERISTICS AND COSTS OF STORAGE HEATING SYSTEMS. LOAD CHARACTERISTICS WERE DISCUSSED AT THE JULY PARIS MEETING BUT COSTS WERE NOT.

- 4.01 U.S. DATA ON EFFECT OF DIRECT SPACE HEATING ON LOAD CURVES
  - 4.11 DEMAND CURVE AND DIVERSITY INFORMATION AS A FUNCTION OF INCREASED PENETRATION OF ELECTRIC HEATING MARKET (ACTUAL RECORDED DATA PREFERRED)
  - 4.12 DATA AS UNDER 4.011 FOR U.S. UTILITIES IN SEVERE, INTERMEDIATE, AND MARGINAL WINTER CONDITIONS
- 4.02 COSTS OF EUROPEAN STORAGE HEATING SYSTEMS
  - 4.021 BLOCK STORAGE UNITS (STATIC AND DYNAMIC)

- 4.022 FLOOR WARMING
- 4.023 CONTROL DEVICES

#### 5.0 TIME OF DAY/PEAK LOAD METERING

SOME U.S. UTILITIES HAVE EXPRESSED THE FEELING THAT THE ADDITIONAL COST OF SUCH METERING AND ASSOCIATED BILLING MAY NEGATE SAVINGS IN COST OF SERVICE. HENCE UNCLASSIFIED

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INFORMATION IS SOLICITED FROM THE EUROPEAN UTILITIES ON

THE LATEST DEVELOPMENTS IN SUCH METERING SYSTEMS AND THE COSTS OF SUCH SYSTEMS (INCLUDING RIPPLE CONTROL).

#### 6.0 MAXIMUM PRACTICABLE LOAD FACTOR

SOME U.S. UTILITIES HAVE EXPRESSED CONCERN THAT ABOVE A CERTAIN LOAD FACTOR (E.G. 70 PER CENT) ECONOMIC BENEFITS DISAPPEAR BECAUSE OF THE NECESSITY OF INCREASED GENERATING CAPACITY TO PRESERVE AN ADEQUATE RESERVE DURING PERIODS OF MAINTENANCE ON UNITS. IT IS PROPOSED THAT THIS PROBLEM BE DISCUSSED. THERE MAY BE SOME OPTIMUM MIX OF TYPE AND SIZE OF OPERATING UNITS TO MINIMIZE THIS EFFECT.

#### 7.0 RATE STRUCTURE RATIONALE

THERE APPEAR TO BE DIFFERENCES OF OPINION BETWEEN SOME OF THE U.S. UTILITIES AND THE EUROPEAN UTILITIES AS TO THE MAGNITUDE OF THE DIFFERENTIAL BETWEEN PEAK AND OFF-PEAK RATES WHEN RATES ARE BASED ON TRUE COST OF SERVICE. THIS IS A COMPLEX PROBLEM WHICH INCLUDES QUESTIONS SUCH AS THE APPLICABILITY OF SHORT OR LONG RANGE MARGINAL COSTS AND THE METHOD FOR ACCOUNTING FOR DIVERSITY (SEE FOOTNOTE 3). IT IS THEREFORE PROPOSED THAT THIS SUBJECT BE DISCUSSED SO THAT A CLEAR UNDERSTANDING CAN BE OBTAINED OF THE RATIONALES BEHIND THE RATE STRUCTURES.

#### FOOTNOTES:

1. PROSPECTIVE ATTENDEES WHO WISH TO ADD ITEMS TO
  - THIS LIST OF TOPICS ARE REQUESTED TO SEND THEIR
  - REQUESTS AS SOON AS POSSIBLE TO MR. JOHN H. K.
  - SHANAHAN, ELECTRIC ENERGY ASSOCIATION, 90 PARK AVE.,
  - NEW YORK, NEW YORK 10016
2. SEE "MINUTES AND COMMENTARY" ON UTILITY LOAD MANAGEMENT CONFERENCE HELD IN WASHINGTON, D.C. ON
  - AUGUST 26, 1974

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3. FOR FURTHER DEFINITION OF PROBLEM, SEE SECTION 2.2

- OF THE "MINUTES AND COMMENTARY" ON UTILITY LOAD
- MANAGEMENT HELD IN WASHINGTON, D.C. ON AUGUST 26,
- 1974.

2. REQUEST ADDRESSEES DISTRIBUTE TO LISTED PARTICIPANTS

AT FIRST MEETING:

BELGIUM            GILLAIN, L.  
--            EBES  
--            MECHELSESTEENWEG 271  
--            200 ANTWERPEN, BELGIUM  
--            TEL: 031.30.7800

DENMARK           GULLEV, J.  
--           NESA  
--           DIPL.-ING.  
--           102 STRANDVEJEN  
--           2900 HELLERUP, DENMARK  
--           TEL. 43.4001

FRANCE            LACOSTE, J.  
--           EDF FRANCE  
--           CHARGE DE MISSION A LA DIRECTION  
--           GENERALE D'ELECTRICITE DE FRANCE  
--           32 RUE DE MONCEAU  
--           PARIS 8  
--           TEL: 256.9600

--           MICHEL, H.  
--           EDF FRANCE

--           CITE LES RENARDIERES  
--           77250 MORET-SUR-LONG  
--           TEL: 422.4820

GERMANY           LANGE-HUSKEN, MANFRED  
--           C/O RHEINISCH-WESTFALISCHES  
--           ELEKTRIZITATSWERK AG  
--           43 ESSEN, KRUPSTRASSE 5  
--           WEST GERMANY

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--           TEL: 185.2352

IRELAND           FORDE, MICHAEL  
--           ELECTRICITY SUPPLY BOARD  
--           27 LOWER FITZWILLIAMS ST.  
--           DUBLIN

-- TEL: 76.5831

ITALY COLLI, C.  
-- GRUPPO RICERCHE COMMERCIALI E  
-- DELLA PROGRAMMAZIONE  
-- ENEL  
-- MILAN, VIA AZARIO 1  
-- TEL: 46.8990

-- ELIAS, GIACOMO  
-- COUNGLIO NATIONALE RESEARCH  
-- VIA BIANCO  
-- MILAN 20122  
-- TEL: 832.6392

3. FOR AMEMBASSY PARIS

REQUEST CONTACT M. H. DE MANBLAME DELEQUE GENERAL DE L'  
UNIPEDE, 39 AVE. DE FRIEDLAND 75008 PARIS AND REQUEST  
HE INVITE ADDITIONAL PARTICIPANTS FROM UNIPEDE MEMBERSHIP  
WHO MAY BE INTERESTED. PLEASE ADVISE WILLIAM PORTER,  
FEDERAL ENERGY ADMINISTRATION NAMES OF INVITEES NO  
LATER THAN NOVEMBER 1.

KISSINGER UNQTE INGERSOLL

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## Message Attributes

**Automatic Decaptioning:** X  
**Capture Date:** 27 JUL 1999  
**Channel Indicators:** n/a  
**Current Classification:** UNCLASSIFIED  
**Concepts:** CONSERVATION, MEETING AGENDA  
**Control Number:** n/a  
**Copy:** SINGLE  
**Draft Date:** 01 NOV 1974  
**Decaption Date:** 01 JAN 1960  
**Decaption Note:**  
**Disposition Action:** n/a  
**Disposition Approved on Date:**  
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**Disposition Case Number:** n/a  
**Disposition Comment:**  
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**Disposition Event:**  
**Disposition History:** n/a  
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**Disposition Remarks:**  
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**Document Source:** ADS  
**Document Unique ID:** 00  
**Drafter:** EUR/RPM: DTELLEEN  
**Enclosure:** n/a  
**Executive Order:** N/A  
**Errors:** n/a  
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**Handling Restrictions:** n/a  
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**Legacy Key:** link1974/newtext/t19741186/abbryzzg.tel  
**Line Count:** 352  
**Locator:** TEXT ON-LINE, TEXT ON MICROFILM  
**Office:** ORIGIN EUR  
**Original Classification:** UNCLASSIFIED  
**Original Handling Restrictions:** n/a  
**Original Previous Classification:** n/a  
**Original Previous Handling Restrictions:** n/a  
**Page Count:** 7  
**Previous Channel Indicators:**  
**Previous Classification:** n/a  
**Previous Handling Restrictions:** n/a  
**Reference:** n/a  
**Review Action:** RELEASED, APPROVED  
**Review Authority:** elyme  
**Review Comment:** n/a  
**Review Content Flags:**  
**Review Date:** 12 NOV 2002  
**Review Event:**  
**Review Exemptions:** n/a  
**Review History:** RELEASED <12 NOV 2002 by cunninfx>; APPROVED <10 FEB 2003 by elyme>  
**Review Markings:**

Declassified/Released  
US Department of State  
EO Systematic Review  
30 JUN 2005

**Review Media Identifier:**  
**Review Referrals:** n/a  
**Review Release Date:** n/a  
**Review Release Event:** n/a  
**Review Transfer Date:**  
**Review Withdrawn Fields:** n/a  
**Secure:** OPEN  
**Status:** <DBA CORRECTED> jms 971106; jms 971106  
**Subject:** CCMS ENERGY CONSERVATION UTILITY LOAD MANAGEMENT -- NOVEMBER 12-13  
**TAGS:** OCON, CCMS, NATO  
**To:** ATHENS  
ANKARA  
BELGRADE  
HELSINKI  
LISBON  
OSLO  
LUXEMBOURG



MADRID  
OTTAWA  
REYKJAVIK  
STOCKHOLM  
VIENNA  
WARSAW  
GENEVA  
BERN

**Type:** TE

**Markings:** Declassified/Released US Department of State EO Systematic Review 30 JUN 2005